Amendments to the specification:

1. Please replace paragraph [001] beginning at page 2, line 2 of the specification with the following amended paragraph:

This application ~~is related to~~ claims the benefit of provisional U.S. Patent Application S.N. 60/444,326, filed 1/31/2003 and having the same inventors and same title as the present application, and which is incorporated herein by reference.

2. Please replace paragraph [030] beginning at page 5, line 26 of the specification with the following amended paragraph:

Referring first to Figures 1A and 1B, a cutting assembly 100 may be mounted at the distal tip of a pen like housing 110. The cutting assembly 100 may be used for cutting various materials. As one example, not intended to be a limitation, the cutting assembly can be used to cut commercially manufactured materials, such as paper or plastic, as well as organic material, such as animal or human tissue. The cutting assembly 100 can be made in a variety of shapes, but for the sake of clarity the cutting assembly 100 is shown to emulate the shape of a hand held cutting instrument, such as a scalpel. Furthermore, for the sake of clarity, the cutting assembly will be discussed or described herein in the context of cutting or manipulating organic tissue. However, the functional elements discussed and the methods set forth can easily be applied ~~application~~ to applications relating to cutting manufactured materials, such as Kevlar or other fabrics.

3. Please replace paragraph [035] beginning at page 7, line 19 of the

specification with the following amended paragraph:

A separate external driver mechanism, discussed hereinafter in connection with Figures 14-18, is required to urge the blade about the pivot and to define the cutter velocity. A source of motive force, such as a motor and energy storage device, form part of the driver mechanism. The incision system of Figures 3A-3D operates as follows. For the sake of convenience only, a housing of the sort shown in Figure 1 will be assumed, although the particular form of housing is not limiting. A user initiated cutting event begins by actuating an activation switch, such as the activation switch 130 of Figure 1, which causes the driver mechanism to provide a resultant rotational movement of the cutting blade about the cutting blade pivot or axle. The cutting blade, such as the cutting ~~baled~~ blade 320 of Figures 3A-3D, has an eccentric bore and, hence is eccentrically mounted. Accordingly, upon rotation of the eccentrically mounted cutting blade about the pivot, the cutting edge simultaneously advances and rotates into the target tissue.

4. Please replace paragraph [037] beginning at page 8, line 8 of the specification with the following amended paragraph:

As shown best in Figure 3D, in a first position, the eccentrically mounted cutting blade 320 is "parked" or rotated to a safe state where no part of the cutting blade 320 extends beyond a distal tip 370 of the bearing block 330 ~~that~~ in order to protect against and prevent accidental contact with the cutting blade 320. In this position, clinicians and the patient are protected from the cutting

blade 320 by the distal tip 370 of the bearing block 370. In this first position the cutting assembly 300 may be used as a tissue manipulator for blunt dissection, or as a tissue probe.

5. Please replace paragraph [039] beginning at page 8, line 23 of the specification with the following amended paragraph:

Figure 4A shows a side elevation view of the bearing block 330 and the cutting blade 320, and Figure 4B shows a cut-away view of the cutting blade 320 mounting relative to the bearing block 330. In the position shown in Figures 4A and 4B, the ~~eccentric~~ eccentrically mounted cutting blade 320 reaches peak extension as limited by the degree of eccentricity. In this position, the maximum depth of a cut 410 is regulated and the exposed edge of cutting blade 320 ~~has achieved maximum angular~~ is moving at maximum velocity ~~along the principal cutting axis in a rotational direction 420~~ relative to the bearing block, as the blade is rotated as shown by arrow 420 in Figure 4B.

6. Please insert the following new paragraph after paragraph [041] on page 9:

Figures 5A and 5B show an alternative configuration of the eccentrically mounted circular cutting blade 320, according to a further embodiment of the invention. In Figure 5A, the blade 320 is shown exposed to its full extent. The axle 350 is positioned further from the tip of the bearing block 330, compared with the configuration shown in Figures 4A and 4B. Therefore less of the cutting blade 320 is exposed during rotation of the blade. Furthermore, in Figure 5B the

position of axle 350 is rotated from its position in Figure 4B, resulting in a different blade profile being exposed beyond the bearing block as the blade is rotated.

7. Please replace paragraph [043] beginning at page 9, line 18 of the specification with the following amended paragraph:

In another alternative implementation, shown in Figures 7A-7D, a housing 700 shown in side elevation view in Figure 7A and 7B and cut-away side views in Figures 7C and 7D a concentrically mounted cutting blade 710 having at least one protruding or "shark-fin" style blade element 720 is intermittently or continuously rotated a fractional revolution, a complete revolution or a multiplicity of revolutions as a means of cutting tissue. As shown in Figure 7B, the cutting blade 710 is contained within the housing 700 while the blade element 720 is exposed. The blade element 720 may be constructed in a manner to provide a cam like cutting edge with increasing blade engagement as the blade element 720 advances, until the blade element 720 reaches maximum exposure and <u>the exposed edge of the blade reaches</u> maximum velocity ~~in a rotational direction 730 as shown in Figure 7D~~ <u>relative to the bearing block, as the blade is rotated as indicated by arrow 730 in Figure 7D</u>.

8. Please replace paragraph [045] beginning at page 10, line 3 of the specification with the following amended paragraph:

In a still further alternative implementation shown in Figures 9A-9D, a concentrically mounted circular blade 900 is intermittently or continuously rotated

about a moveable pivot 910 housed within a protective bearing block 920. A clinician initiated cutting event is actuated by means of ~~an energy storing mechanism~~ a driver 930 that ~~provides a resultant rotational moment~~ causes the blade to rotate about the pivot 910 and [[a]] simultaneously ~~advancement of the pivot 910~~ advances the blade ~~within~~ out of the protective bearing block 920.

9. Please replace paragraph [048] beginning at page 10, line 21 of the specification with the following amended paragraph:

In another implementation shown in Figures 12A-12C, more than one blade, such as blades 1210 and 1220, may be utilized. Figure 12A illustrates in top plan view the cutting assembly 1200. Figure 12B illustrates a front elevation view of the cutting assembly 1200, including rotary cutting blades 1210 and 1220. Figure 12C illustrates a side elevation view of the cutting assembly 1200. The blades are mounted parallel to one another and may be used to make parallel incisions or strips of tissues. Furthermore, blades may be mounted so as to move synchronously or asynchronously with respect to the axle; that is, if synchronous, the two blades rotate or advance together, and if asynchronous, the two blades move independently (at different times or rates, for example) relative to one another.

10. Please replace paragraph [049] beginning at page 10, line 28 of the specification with the following amended paragraph:

Additionally, as shown in Figures 13A-13B, mono-polar or bi-polar electrocautery may be added for further tissue manipulations. Thus, in Figure

13A, showing a monopolar electrocautery arrangement, a blade 1300 is polarized with a first polarity (for example, positive~~) relative to a housing 1310~~. Or, as shown in the bipolar arrangement of Figure 13B, insulators 1320 may be mounted on either side of the blade 1300 and within the housing 1310 such that the blade 1300 has a first polarity and closely juxtaposed contacts 1330 are maintained at the opposite polarity, <u>or at ground.</u>

11. Please replace paragraph [052] beginning at page 11, line 19 of the specification with the following amended paragraph:

As shown in Figure 17, a motor 1700 may be directly connected to an axle 1710 and electronically controlled. Or, as shown in Figure 18, reciprocating motion to a cutting element may also be achieved through the use of a slider crank type mechanism 1800 connected to a cam arm 1810 [[at]] <u>attached to</u> a blade pivot axle 1820. Alternatively, by mounting the crank 1800 on the outside of the cam arm 1810, full rotation may be achieved. Optionally, the cutting element may also be driven by hydraulic or pneumatic means.

12. Please replace paragraph [053] beginning at page 11, line 26 of the specification with the following amended paragraph:

Referring next to Figures 19A-19D and Figure 20, a cutting assembly 1900 is shown having a shaft 1910, a blade 1920, and a housing 1930 with a cavity located at the end of the housing 1930 proximate to the blade 1920. A cantilever spring element 1912 is located at one end of the shaft 1910. The spring element 1912 is located proximate to and in contact with a central axle

1922 of the blade 1920 as shown in Figures 19A-D and Figure 20. The central axle 1922 is positioned within the cavity of the housing 1930, such that the forward motion of the blade 1920, which is ~~cause~~ caused by the linear motion of the shaft 1910, is limited as seen in the cross-section view of Figure 19D taken along the line C-C of Figure 19C. When the central axle 1922 has reached the maximum linear travel in a direction 1950, the blade 1920 is extended the maximum distance out from the housing 1930 as shown in Figure 19B. However, the shaft 1910 can continue its linear travel in the direction 1950. Accordingly, this linear travel of the shaft 1910 is translated into rotational motion 1960 of the blade 1920 as the shaft 1910 forces a pin 1924, which is secured to the blade 1920, to rotate about the axle 1922 until the spring element 1912 is compressed and the maximum linear motion of the shaft 1910 is reached as shown in Figure 19C. Consequently, the rotation of the pin 1924 about the axle 1922 results in the rotational motion 1960 of the blade 1920. Thus, the linear motion 1950 of the shaft 1910 first results in extension of the blade 1920 from the housing 1930 and then rotational motion 1960 of the blade 1920 about the axle 1922. Figure 20 shows a perspective view of the stationary configuration shown in Figure 19A.

13. Please replace paragraph [055] beginning at page 12, line 19 of the specification with the following amended paragraph:

It will thus be appreciated that a new and novel design of incision system has been disclosed. Among the advantages offered by one or more [[of]] implementations of the invention are a controlled depth of cut, a retractable

blade offering ~~increasing~~ increased user and patient safety, high ~~relative~~ velocity (relative to the prior art) [[of]] cutting element permitting lower cutting forces to be applied by the user, and flexible mounting arrangements including articulated and more conventional mountings. Having fully disclosed a variety of implementations of the present invention, it will be appreciated by those skilled in the art that numerous alternatives and equivalents exist which do not materially alter the invention described herein. Therefore, the invention is not intended to be limited by the foregoing description, but instead only by the appended claims.

14. Please replace the Abstract beginning at page 15, line 3 of the specification with the following amended Abstract:

A system for rapid manipulation and cutting that includes ~~comprising~~ a housing, a first cutting element, and a drive mechanism adapted to be mounted at least partly within the housing and connected to the first cutting element for imparting relative motion to the first cutting element as a combination of slicing and downward forces at the portion of the first cutting element which is adapted to contact the tissue.